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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/673,658

09/29/2003

Takehiro Nakamura

15689.49.5

2363

22913

7590

11/07/2006

WORKMAN NYDEGGER  
(F/K/A WORKMAN NYDEGGER & SEELEY)  
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EXAMINER

KIM, KEVIN

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 11/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/673,658

Applicant(s)

NAKAMURA ET AL.

Examiner

Kevin Y. Kim

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. Claims 5-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strich et al (US 6,473,447) in view of Abramson (5,745,485).

Claims 1 and 13.

Strich et al discloses a transmission apparatus and method, comprising:

a spreading means (310, 314, 316) for spreading the in-phase and quadrature components of a signal (300) to be transmitted by using a short code (Walsh code) and a long code (PN code) and

transmission means (see Fig.9) for transmitting the signal whose in-phase and quadrature component have been spread.

The claimed invention differs from Strich et al's apparatus in that the long code for the in-phase component is different from that for the quadrature component.

Abramson teaches that one may use different spreading codes for the in-phase component quadrature components in particular because the use of different codes helps to detect asynchronous transmissions from different transmitters. See col.4, lines 11-20.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to use different long codes for the in-phase and quadrature components of a transmission signal in the apparatus of Strich et al for the purpose of helping detect asynchronous transmissions from different transmitters, as taught by Abramson.

Claim 6.

It is quite established that since a spreading code is a pseudo random in nature, the shifting in phase of the spreading code results in a different pseudo random code. Thus, the obtaining of the long code for the quadrature component by shifting the long code for the in-phase component would have been obvious to one skilled in the art at the time the invention was made.

Claim 7.

Fig. 7 and 9 of Strich et al shows a complex operation between the in-phase and quadrature components of the long code and the in-phase and quadrature components of the signal.

Claim 8.

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Fig. 7 and 9 of Strich et al shows using the same short code, i.e., Walsh code, for the in-phase and quadrature components of the signal.

Claims 9 and 14.

Strich et al discloses a receiver apparatus and method, comprising:

reception means (250) for receiving a spread signal and  
dispreading for dispreading the in-phase and quadrature components of the  
received signal by using a short and a long code.

Although not described in details, such a despreader is inherent to despread a signal spread by a short and a long code as explained in connection with claim 5 above. Likewise, since it would have been obvious that different long codes are used at the transmitter for the in-phase and quadrature components, as explained above, the same set of the different long codes are necessarily used at the receiver.

Claim 10.

It is quite established that since a spreading code is a pseudo random in nature, the shifting in phase of the spreading code results in a different pseudo random code. Thus, the obtaining of the long code for the quadrature component by shifting the long code for the in-phase component would have been obvious to one skilled in the art at the time the invention was made.

Claim 11.

Fig. 7 and 9 of Strich et al shows a complex operation between the in-phase and quadrature components of the long code and the in-phase and quadrature components of the signal.

Claim 12.

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Fig. 7 and 9 of Strich et al shows using the same short code, i.e., Walsh code, for the in-phase and quadrature components of the signal.

Claim 15.

Strich et al disclose the transmission apparatus and the reception apparatus comprising the recited elements, as explained in connection with claims 5 and 9 above.

### *Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takahashi et al (US 5,881,099) teaches different spreading codes for the in-phase component quadrature components. See claim 1.

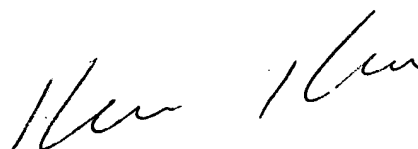
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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**KEVIN KIM**  
**PRIMARY PATENT EXAMINER**